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SUMMARY OF THE CONDITION OF SOUTH FLORIDA WATER STORAGE AREAS
IN THE 1970-71 AND 1971-72 DRY SEASONS

Central and Southern Florida
Flood Control District

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Introduction

This report is a compilation and summary of rainfall, evaporation, water use, reservoir inflow and reservoir storage data for the two periods October through May, 1970-1971, and October through May, 1971-1972.

The 1970-1971 period was one of extreme rainfall deficiency which necessitated the institution of water use restrictions on May 3, 1971. In the spring of 1971 drought conditions continued into mid-June at which time normal moderate to heavy rainfall occurred, providing relief. In the spring of 1972, heavy rains occurred in May. Consequently, data comparisons are not carried beyond May 31 even though the 1970-1971 drought extended into June.

In the following discussion data comparisons will be made by means of tables and graphs wherever possible. The purpose of making these comparisons is to show how both reservoir storage and water demand are affected by rainfall amounts and distribution. It will show how water demands tend to increase with rainfall deficiencies while at the same time available water in storage decreases.

Finally, a set of graphs are presented which will summarize all of the data for the period October through May, 1971-1972, which was presented in the monthly reports to the Governing Board.

Rainfall

Table 1 summarizes the total data for each period. Table 2, 3, 4, and 5 list the monthly rainfall data for the two periods, by reservoir area.

Figures 1-A and 1-B compare the accumulated rainfall for each period with normal rainfall.

The cumulative effect of continued rainfall deficiencies in producing drought conditions can be noted on all four curves of Figures 1-A and 1-B for the period November through April, 1970-1971. Rainfall deficiencies in this 6 months ranged from 7 to 12 inches.

It will be noted that for this same period in 1971-1972, rainfall over Lake Okeechobee and the Central Everglades approximated normal values. Rainfall was deficient over the Southern Everglades in the early part of the period whereas it was surplus, with respect to normal, throughout the entire period over the Northern Everglades.

Evaporation

Open pan evaporation data for Lake Okeechobee and at Pumping Station 7 are given in Tables 6 and 7. These data seem to indicate higher evaporation losses during the rainfall deficient period of 1970-1971 when compared with the more or less normal rainfall period of 1971-72. However, there are meteorological factors other than rainfall which affect evaporation rates and amounts. Therefore, nothing conclusive can be drawn from these data.

Table 8 lists estimates of the monthly evaporation drafts on Lake Okeechobee for the two periods. Also given are the monthly releases from the Lake for beneficial use purposes. Evaporation loss represents the major portion of the total draft on Lake storage.

Water Delivery and Use

Table 9 is a summary of the water deliveries to the service areas of each of the four reservoirs, for both periods. Seepage from the conservation

areas to the east coast is assumed to be a beneficial use. Since Conservation Area No. 1 stages were much higher in 1971-72 than in 1970-71, delivery (seepage) volumes were higher also. It will be noted that elsewhere deliveries (and use) were less in 1971-72 than in 1970-71.

Tables 10 through 14 show the monthly breakdowns of deliveries from the individual reservoirs to specific service areas, for both periods. Points at which deliveries were made are indicated; e.g., HGS-4, S-39, S-151, etc. Water withdrawn from St. Lucie Canal for irrigation use in Martin County is estimated and is shown only as a total for the period.

Delivery to Everglades National Park in October and November, 1971, was less than the specified minimum delivery. In June of 1971 a request was received from the Superintendent of Everglades National Park that further deliveries to the Park be in accordance with the Senate Appropriations Committee Report on P. L. 91-282 dated June 19, 1970. Application of the formula in that report resulted in reductions in deliveries to the Park in the months July through November, 1971. In December, 1971, at the request of this District, normal minimum monthly deliveries to the Park were resumed. This accounts for the lower Park delivery amounts for 1971-72 when compared with the deficient rainfall period of 1970-71.

Figure 2 is a comparison of the cumulative total water delivery curves (from all reservoirs) for the two periods.

Reservoir Inflow

Table 15 lists inflows into the four reservoirs from major sources of inflow. Although 1971-72 inflows were below normal for the period it will be noted that they were generally greater than for the 1970-71 period. This,

of course, reflects the effect of greater rainfall amounts (9"-20") during the 1971-72 period.

Figure 3 is a set of bar graphs for each reservoir, for both periods, which compare total input volume from direct rainfall with total input volume contributed from the major surface water input sources: i.e., surface water runoff. It can be seen that direct rainfall, in most months, accounts for the major portion of the input into the reservoirs.

Stage - Storage

Figure 4 is a set of graphs showing reservoir stages for the period January 1970 through May 1972. Long-term mean stages as well as recorded maximum and minimum stages are shown on these hydrographs. The regulation schedule for each reservoir is also shown. It will be seen that throughout the 1970-71 dry season stages in all reservoirs were below the long-term mean stages. However, in the 1971-72 dry season stages in Conservation Area No. 1 were consistently above the mean, were close to the mean in Conservation Area No. 3, and were within less than 1.0 feet of the mean in Lake Okeechobee.

Figures 5 through 9 are curves showing the relationship between available storage at any point in time and remaining estimated water demand from that point to June 30.

Using Figure 6 as an example, the storage curve shows that on April 1, 1972, there were +860,000 A.F. of water in Lake Okeechobee above the 10.5 ft. msl "floor stage." The demand curve (0% reduction curve) shows that the estimated remaining demand, from April 1 to June 30, on storage in the Lake was +460,000 A.F. Consequently, on April 1, 1972, there was a volume of 400,000 A.F. of water in the Lake in excess of projected demands for the

remainder of the dry season.

On the other hand, still using Figure 6, on April 1, 1971, storage in the Lake was only +480,000 A.F. The "excess", therefore, was only 20,000 A.F. This difference is, of course, a measure of the criticality of water supply conditions in the spring of 1971.

The relationship plotted on Figures 5 through 9 were used in making the projections contained in the monthly reports to the Governing Board. They offer an explanation of why, from December 1971 on, it was projected that a critical water supply situation would not exist for the remainder of the 1971-72 dry season.

Water Budget, October 1971-May 1972

Figures 10 through 13 are graphical summaries of the water budget parameters for each of the four reservoirs for the 1971-72 dry season. Plotted on each figure are the accumulated values for direct rainfall plus surface water inflow, seepage and evaporation losses, total outflow plus losses, and available storage.

The difference between the May 1 values for "outflow plus losses" and "rainfall plus inflow" should equal the difference in the "available storage" values on October 1 and on May 1. This would "balance" the water budget for the period October 1 through May 1. The curves for Lake Okeechobee and Conservation Area No. 3A show a reasonably good "balance." This is not the case with Conservation Areas No. 1 and 2A, which indicates that better definition of some of the parameters is required in order to obtain a good accounting.

TABLE I
SUMMARY OF RAINFALL DATA

Area	Normal Oct.-May Inches	Oct.1970-May 1971			Oct.1971-May 1972		
		Total Inches	Dep. From Normal		Total Inches	Dep. From Normal	
			Inches	%		Inches	%
Lake Okeechobee	18.25	11.41	- 6.84	-37.5	20.63	+ 2.38	+13.0
N. Everglades	20.89	12.40	- 8.49	-40.6	32.33	+11.44	+54.8
C. Everglades	22.94	11.65	-11.29	-49.2	28.84	+ 5.90	+25.7
S. Everglades	23.76	13.65	-10.11	-42.6	31.96	+ 8.20	+34.5
Average	21.46	12.28	- 9.18	-42.8	28.44	+ 6.98	+32.5

Remarks: Detailed breakdown of monthly figures are shown in
Tables 2 through 5

TABLE 2
MONTHLY RAINFALL -- LAKE OKEECHOBEE

Month	Normal Inches	1970-1971		1971-1972	
		Inches	Dep. From Normal	Inches	Dep. From Normal
October	4.16	4.31	+0.15	4.92	+0.76
November	1.12	0.07	-1.05	1.76	+0.64
December	1.16	0.30	-0.86	0.99	-0.17
January	1.09	0.22	-0.87	0.91	-0.18
February	1.84	1.10	-0.74	1.75	-0.09
March	2.26	0.89	-1.37	2.91	+0.65
April	2.75	0.17	-2.58	2.22	-0.53
May	3.87	4.35	+0.48	5.17	+1.30
Total	18.25	11.41	-6.84 (a)	20.63	+2.38 (c)
Subtotal to March	11.63	6.89	-4.74 (b)	13.24	+1.61 (d)

Refer to Corps of Engineers' monthly report (Average of the Rainfall stations around the Lake)

(a) -37.5% (b) -40.8% (c) +13.0% (d) +13.8%

TABLE 3

MONTHLY RAINFALL -- NORTHERN EVERGLADES

Month	Normal of 30 Yrs. (Inches)	1970-1971		1971-1972	
		Inches	Dep. From Normal	Inches	Dep. From Normal
October	5.17	3.29	-1.88	6.90	+ 1.73
November	1.46	0.18	-1.28	2.90	+ 1.44
December	1.54	0.28	-1.26	1.46	- 0.08
January	1.66	1.08	-0.58	1.28	- 0.38
February	1.80	2.50	+0.70	1.31	- 0.49
March	2.60	0.52	-2.08	5.48	+ 2.88
April	2.14	0.05	-2.09	3.42	+ 1.28
May	4.52	4.50	-0.02	9.58	+ 5.06
Total	20.89	12.40	-8.49 (a)	32.33	+11.44 (c)
Subtotal for Mar.	14.23	7.85	-6.38 (b)	19.33	+ 5.10 (d)

Refer to U.S.G.S. Monthly Report (Average of rainfall stations at Okeelanta and S-7)

(a) -40.6% (b) -44.8% (c) +54.8% (d) +35.8%

TABLE 4
MONTHLY RAINFALL -- CENTRAL EVERGLADES

Month	Normal of 30 Yrs. (Inches)	1970-1971		1971-1972	
		Inches	Dep.From Normal	Inches	Dep.From Normal
October	5.99	3.95	- 2.04	5.90	-0.09
November	1.76	0.08	- 1.68	1.91	+0.15
December	1.50	0.10	- 1.40	1.86	+0.36
January	1.76	0.67	- 1.09	1.01	-0.75
February	1.86	2.04	+ 0.18	2.15	+0.29
March	2.23	0.40	- 1.83	4.60	+2.37
April	2.82	0.09	- 2.73	4.95	+2.13
May	5.02	4.32	- 0.70	6.46	+1.44
Total	22.94	11.65	-11.29 (a)	28.84	+5.90 (c)
Subtotal to Mar.	15.10	7.24	- 7.86 (b)	17.43	+2.33 (d)

Refer to U.S.G.S. Monthly Report (Average of rainfall stations at S-7 and Miami Canal above Pennsuco)

(a) -49.2% (b) -52.1% (c) +25.7% (d) +15.4%

TABLE 5
MONTHLY RAINFALL -- SOUTHERN EVERGLADES

Month	Normal of 30 Yrs. (Inches)	1970-1971		1971-1972	
		Inches	Dep.From Normal	Inches	Dep.From Normal
October	7.11	8.40	+ 1.29	5.53	-1.58
November	1.72	0.04	- 1.68	1.63	-0.09
December	1.04	0.22	- 0.82	2.00	+0.96
January	1.64	0.68	- 0.96	0.74	-0.90
February	1.70	0.93	- 0.77	3.94	+2.24
March	2.02	0.24	- 1.78	1.82	-0.20
April	2.72	0.04	- 2.68	4.62	+1.90
May	5.81	3.10	- 2.71	11.68	+5.87
Total	23.76	13.65	-10.11 (a)	31.96	+8.20 (c)
Subtotal to Mar.	15.23	10.51	- 4.72 (b)	15.66	+0.43 (d)

Refer to U.S.G.S. Monthly Report (Average of rainfall stations at Homestead and Tamiami Canal at 40-Mile Bend)

(a) -42.6% (b) -31.0% (c) +34.5% (d) +2.8%

TABLE 6
MONTHLY EVAPORATION -- LAKE OKEECHOBEE

Month	Normal In Inches (1955-1970)	1970-1971		1971-1972	
		Inches	Dep. From Normal	Inches	Dep. From Normal
October	4.50	4.90	+0.40	4.42	-0.08
November	3.70	3.14	-0.56	3.35	-0.35
December	3.00	2.92	-0.08	3.12	+0.12
January	3.00	3.04	+0.04	2.90	-0.10
February	3.60	3.65	+0.05	3.63	+0.03
March	5.00	5.57	+0.57	5.61	+0.61
April	5.70	6.66	+0.96	5.99	+0.29
May	6.30	7.60	+1.30	6.48	+0.18
Total	34.80	37.48	+2.68 (a)	35.50	+0.70 (b)

Refer to Corps of Engineers' Monthly Report

(a) +7.7% (b) +2.0%

TABLE 7
MONTHLY EVAPORATION AT S-7

Month	Normal (1961-1970)	1970-1971		1971-1972	
		Inches	Dep.From Normal	Inches	Dep.From Normal
October	3.35	3.7	+0.35	2.71	-0.64
November	3.16	4.0	+0.84	2.75	-0.41
December	2.67	3.5	+0.83	3.27	+0.60
January	2.51	3.5	+0.99	2.88	+0.37
February	3.06	3.4	+0.34	3.56	+0.50
March	4.70	6.4	+1.70	5.44	+0.74
April	5.80	3.5	-2.30	5.59	-0.21
May	5.20	4.5	-0.70	4.13	-1.07
Total	30.45	32.5	+2.05 (a)	30.33	-0.12 (b)

(a) +6.7% (b) -0.4%

TABLE 8

LAKE OKEECHOBEE - RELATION OF EVAPORATION TO TOTAL DRAFT

Month	Q (AF)	Evaporation		Total Draft (AF) (a)	Evap. Draft (%) (b)
		Inches	AF		
<u>1970</u>					
October	43,000	4.9	179,900	222,900	80.7
November	98,000	3.1	111,800	209,800	53.3
December	100,200	2.9	97,200	197,400	49.2
<u>1971</u>					
January	84,300	3.0	97,700	182,000	53.7
February	48,800	3.7	119,300	168,100	71.0
March	100,500	5.6	177,500	278,000	63.9
April	151,600	6.7	197,800	349,400	56.6
May	107,700	7.6	208,500	316,200	65.9
Average					61.8 (c)
<u>1971</u>					
October	15,940	4.4	160,800	176,740	91.0
November	35,078	3.4	123,800	158,878	77.9
December	53,927	3.1	113,800	167,727	67.9
<u>1972</u>					
January	50,031	2.9	103,200	153,231	67.4
February	39,176	3.6	127,300	166,476	76.5
March	79,986	5.6	190,400	270,386	70.4
April	51,720	6.0	196,400	248,120	79.2
May	19,777	6.5	211,518	231,295	91.5
Average					77.7 (c)

- Notes: (a) Total draft (AF) = Outflow (AF) + Evaporation (AF)
 (b) Evaporation draft (%) = Evaporation (AF)/Total draft (AF)
 (c) The greater outflow figures of 1970-71 caused conversely a lower average percentage of evaporation draft than in 1971-1972.

TABLE 9

SUMMARY OF WATER DELIVERY - OCTOBER THROUGH MAY

Area	Oct. 1970 Thru May 1971 (Acre-Ft.)	Oct. 1971 Thru May 1972		
		Total (Acre-Ft.)	Dep. From 70-71	
			Acre-Ft.	%
Lake Okeechobee	734,477	345,635	-388,842	-52.94
Conservation Area 1	110,248	161,011	+ 50,763	+46.04
Conservation Area 2A	110,950	76,569	- 34,381	-30.99
Conservation Area 3A	220,400	228,357	+ 7,957	+ 3.61
Everglades National Park	203,640	195,980	- 7,660	- 3.76
Total	1,379,715	1,007,552	-372,163	-26.97

Remarks: Detailed breakdown of monthly figures are shown in
Tables 10 through 14.

TABLE 10

LAKE OKEECHOBEE SERVICE AREA DEMAND (ACRE-FT.)

Month	Lake Shore Area	HGS-3 (a)	HGS-4 (a)	HGS-5	S-77	St. Lucie Lock	Martin County	Monthly ^(b) Demand
<u>1970</u>								
Oct.	4,346	3,886	9,826	16,225	2,208	1,607		43,098
Nov.	2,608	17,853	35,199	27,618	7,434	2,289		98,001
Dec.	2,985	13,361	36,120	28,247	11,750	2,905		100,368
<u>1971</u>								
Jan.	3,918	21,346	24,314	18,710	8,240	2,944		84,472
Feb.	2,103	15,547	11,237	11,546	680	2,658		48,771
Mar.	0	17,647	36,002	18,788	20,200	2,747		100,384
Apr.	0	30,211	56,722	26,121	30,870	2,737		151,661
May	5,831	40,138	37,954	5,526	12,000	1,273		107,722
Total	21,791	159,989	247,374	152,781	93,382	19,160	40,000	734,477
<u>1971</u>								
Oct.	0	2,327	4,857	2,711	307	738		15,940
Nov.	0	4,647	13,828	9,114	2,489	0		35,078
Dec.	0	8,241	21,443	12,446	6,508	289		53,927
<u>1972</u>								
Jan.	0	6,801	14,106	6,566	8,641	8,917		50,031
Feb.	972	4,065	14,096	8,781	5,103	1,159		39,176
Mar.	1,190	10,902	29,134	19,857	12,401	1,502		79,986
Apr.	0	3,608	18,436	10,563	13,042	1,071		51,720
May	1,388	782	0	0	11,500	1,107		19,777
Total	3,550	41,373	115,900	70,038	59,991	14,783	40,000	345,635

(a) Back Pumping to the Lake is not included.

(b) Including the estimate of monthly delivery for Martin County Agricultural demand.

TABLE 11

CONSERVATION AREA 1 SERVICE AREA DEMAND

Month	S-39 (Acre-Ft.)	Seepage (Acre-Ft.)	Total (Acre-Ft.)
<u>1970</u>			
Oct.	3,818	12,173	15,991
Nov.	10,078	10,946	21,024
Dec.	14,265	5,773	20,038
<u>1971</u>			
Jan.	7,456	5,718	13,174
Feb.	7,306	3,726	11,032
Mar.	11,662	1,844	13,506
Apr.	11,375	1,785	13,160
May	1,708	615	2,323
Total	67,668	42,580	110,248
<u>1971</u>			
Oct.	0	18,754	18,754
Nov.	1,990	21,921	23,911
Dec.	550	21,614	22,164
<u>1972</u>			
Jan.	0	21,132	21,132
Feb.	770	19,434	20,204
Mar.	3,120	19,323	22,443
Apr.	2,170	15,878	18,048
May	0	14,355	14,355
Total	8,600	152,411	161,011

Note: Seepage to the east is considered as beneficial use demand; values of 71-72 are higher than 70-71 because of higher stage in Conservation Area 1 which created greater seepage.

TABLE 12

CONSERVATION AREA 2A SERVICE AREA DEMAND

Month	S-34,S-38 (Acre-Ft.)	Seepage (Acre-Ft.)	Monthly Total (Acre-Ft.)
<u>1970</u>			
Oct.	0	10,500	10,500
Nov.	2,000	10,500	12,500
Dec.	2,100	13,300	15,400
<u>1971</u>			
Jan.	2,150	7,700	9,850
Feb.	3,600	6,700	10,300
Mar.	13,000	4,900	17,900
Apr.	16,500	3,000	19,500
May	12,000	3,000	15,000
Total	51,350	59,600	110,950
<u>1971</u>			
Oct.	0	10,023	10,023
Nov.	0	8,926	8,926
Dec.	0	9,838	9,838
<u>1972</u>			
Jan.	0	9,209	9,209
Feb.	0	8,226	8,226
Mar.	0	7,994	7,994
Apr.	615	11,900	12,515
May	0	9,838	9,838
Total	615	75,954	76,569

TABLE 13

CONSERVATION AREA 3A SERVICE AREA DEMAND

WITH 115,000 ac ft Peak demand

Month	S-151 (Acre-Ft.)	Seepage (Acre-Ft.)	Monthly Total (Acre-Ft.)
<u>1970</u>			
Oct.	0	44,300 ⁴⁵⁰⁰⁰	44,300
Nov.	0	38,100 ³⁵⁰⁰⁰	38,100
Dec.	0	34,400 ²⁹⁰⁰⁰	34,400
<u>1971</u>			
Jan.	0	27,700 ²⁶⁰⁰⁰	27,700
Feb.	0	21,700 ²²⁰⁰⁰	21,700
Mar.	0	18,400 ¹⁹⁰⁰⁰	18,400
Apr.	6,900	8,900 ¹⁷⁰⁰⁰	15,800
May	10,800	9,200 ¹⁴⁰⁰⁰	20,000
Total	17,700	202,700	220,400
<u>1971</u>			
Oct.	2,020	35,663	37,683
Nov.	0	35,703	35,703
Dec.	0	31,974	31,974
<u>1972</u>			
Jan.	0	29,514	29,514
Feb.	0	25,309	25,309
Mar.	0	22,751	22,751
Apr.	0	20,828	20,828
May	0	24,595	24,595
Total	2,020	226,337	228,357

TABLE 14

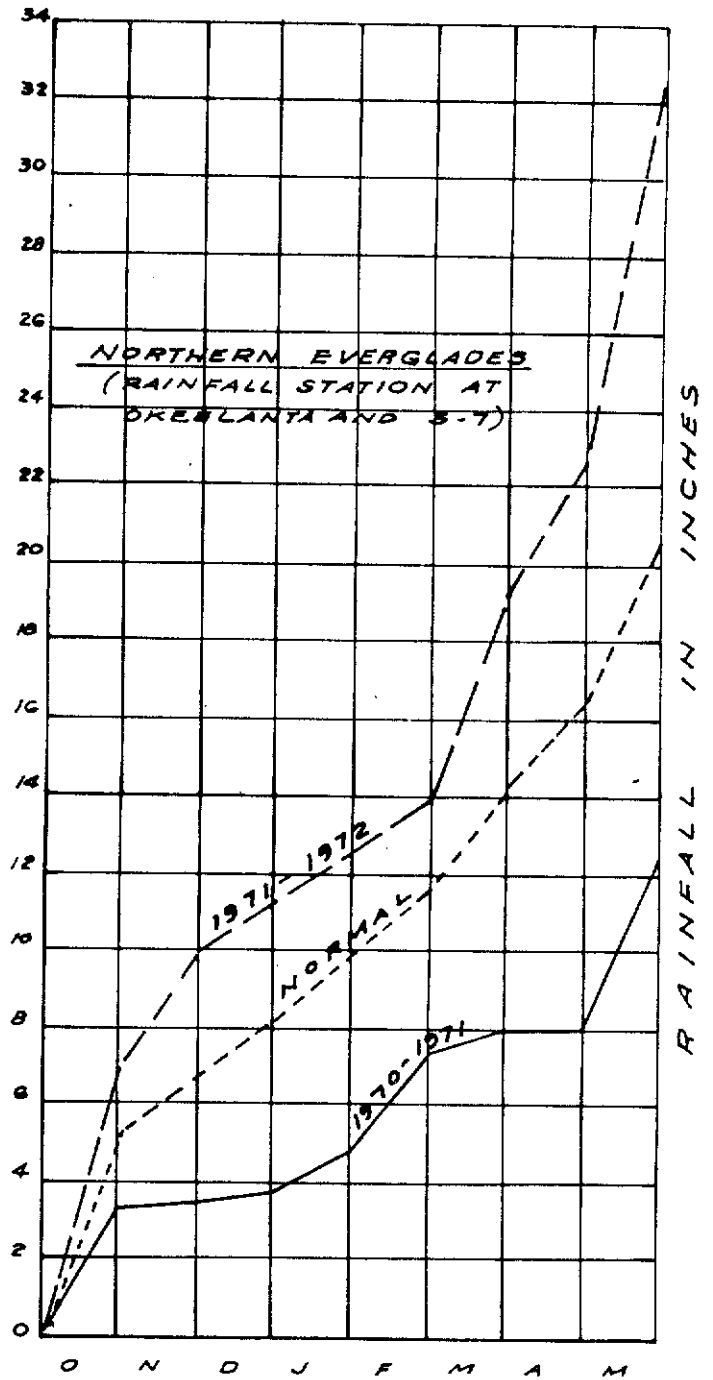
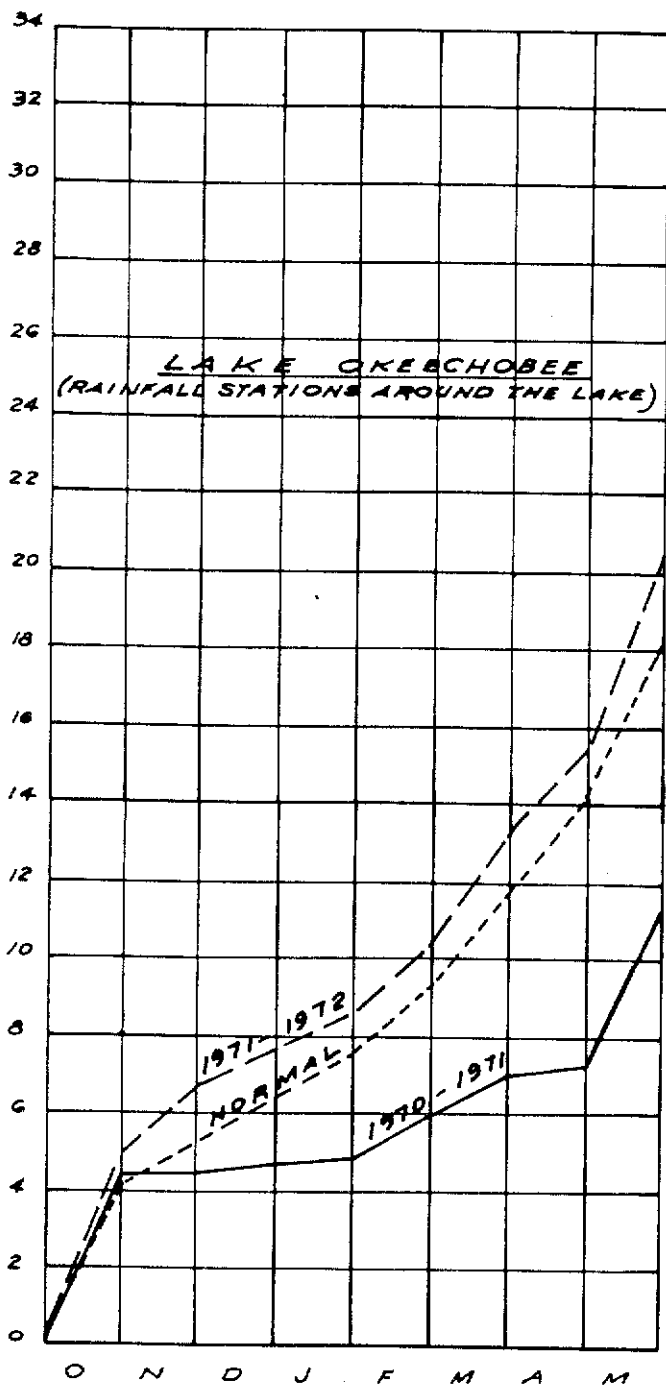
EVERGLADES NATIONAL PARK DEMAND

Month	Scheduled Demand (Acre-Ft.)	S-12 Structure Release (Acre-Ft.)	Departure From Schedule Release (Acre-Ft.)
<u>1970</u>			
Oct.	67,000	68,880 ⁶⁷⁰⁰⁰	+ 1,880
Nov.	59,000	56,010 ⁵⁹⁰⁰⁰	- 2,990
Dec.	32,000	37,800 ³²⁰⁰⁰	+ 5,800
<u>1971</u>			
Jan.	22,000	22,600 ²²⁰⁰⁰	+ 600
Feb.	9,000	9,970 ⁹⁰⁰⁰	+ 970
Mar.	4,000	4,160 ⁴⁰⁰⁰	+ 160
Apr.	1,700	1,550 ¹⁷⁰⁰	- 150
May	1,700	2,670 ¹⁷⁰⁰	+ 970
Total	196,400	203,640	+ 7,240
<u>1971</u>			
Oct.	67,000	51,830	-15,170
Nov.	59,000	58,450	- 550
Dec.	32,000	36,460	+ 4,460
<u>1972</u>			
Jan.	22,000	24,350	+ 2,350
Feb.	9,000	10,160	+ 1,160
Mar.	4,000	4,150	+ 150
Apr.	1,700	1,280	- 420
May	1,700	9,300	+ 7,600
Total	196,400	195,980	- 420

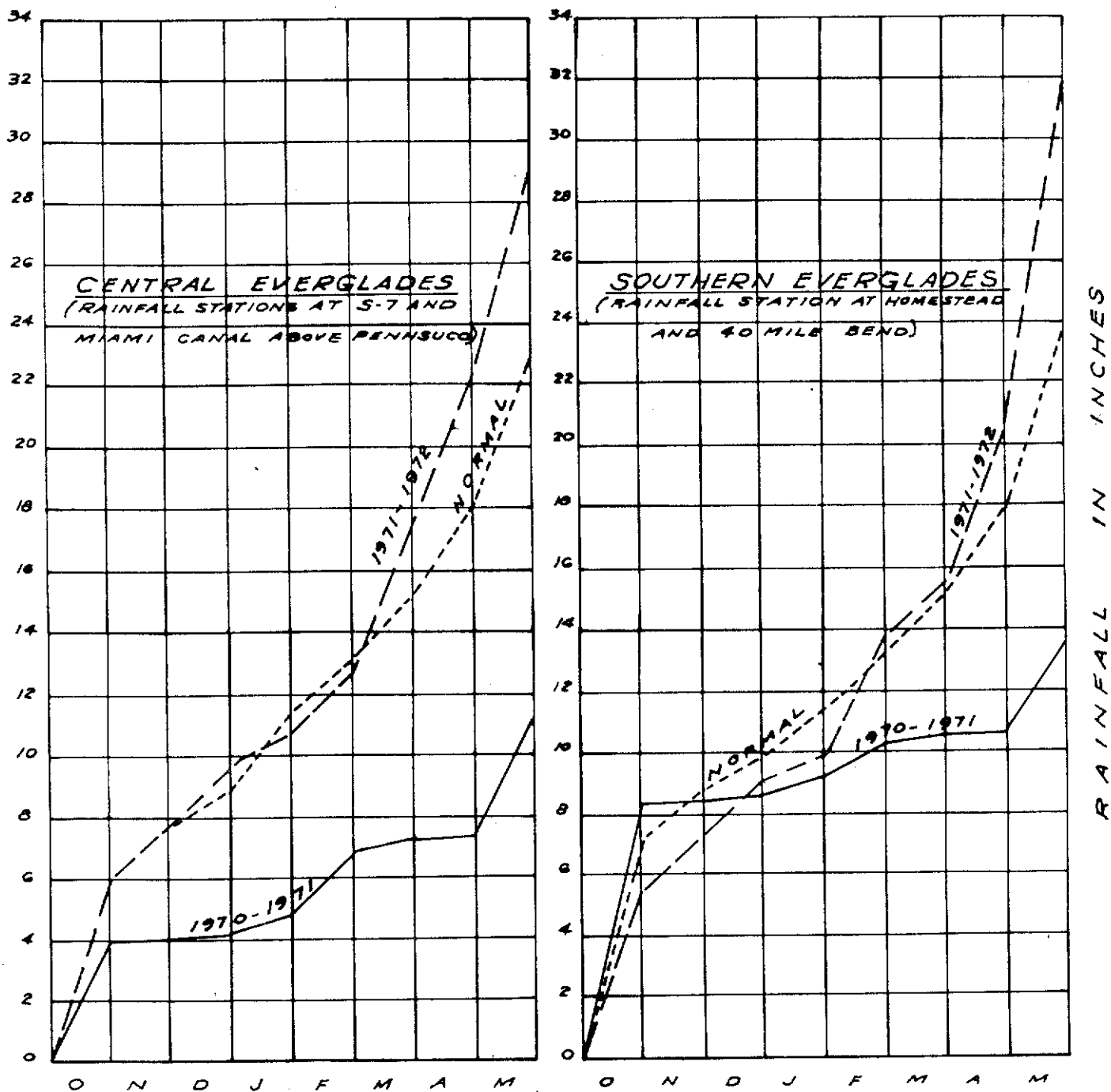
TABLE 15

SELECTED INFLOW DATA - OCTOBER THROUGH MAY

Station	Average Discharge Oct.-May (Acre-Ft.)	Discharge, Oct. 70 Thru May 71			Discharge, Oct. 71 Thru May 72		
		Total (Acre-Ft.)	Dep. From Normal Acre-Ft.	%	Total (Acre-Ft.)	Dep. From Normal Acre-Ft.	%
<u>Lake Okeechobee</u>							
Kissimmee River	771,570 (1964-70)	257,780	-513,790	-66.59	158,032	-613,538	-79.52
Taylor Creek	33,155 (1956-70)	13,440	- 19,715	-59.46	13,569	- 19,586	-59.07
Fisheating Creek	86,922 (1956-70)	29,243	- 57,679	-66.36	20,741	- 66,181	-76.14
<u>Conservation Area 1</u>							
S-5A	130,460 (1958-70)	132,230	+ 1,770	+ 1.36	120,390	- 10,070	- 7.72
S-6	81,744 (1960-1970)	25,500	- 56,244	-68.80	101,650	+ 19,906	+24.35
<u>Conservation Area 2A</u>							
S-7	84,069 (1961-1970)	39,180	- 44,889	-53.40	71,160	- 12,909	-15.36
<u>Conservation Area 3A</u>							
S-8	105,676 (1962-1970)	91,020	- 14,656	-13.87	55,997	- 49,679	-47.01
S-9	50,101 (1958-1970)	17,200	- 32,901	-65.67	93,520	+ 43,419	+86.66



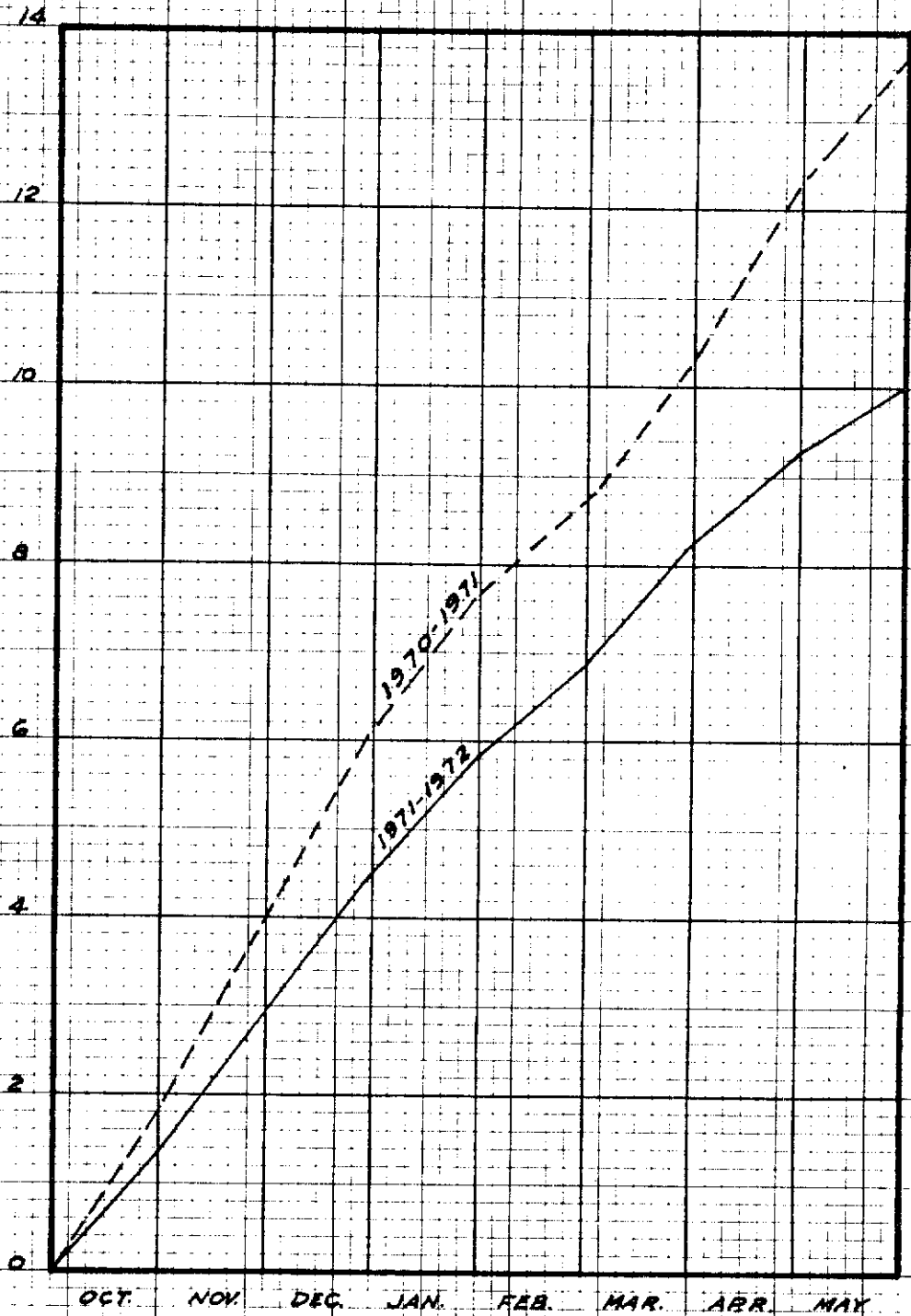
ACCUMULATED RAINFALL FROM OCTOBER TO MAY



ACCUMULATED RAINFALL FROM OCTOBER TO MA.

FIGURE I-B

VOLUME IN 100,000 ACRES - FT.



MASS CURVES OF WATER DELIVERY

FIGURE 2

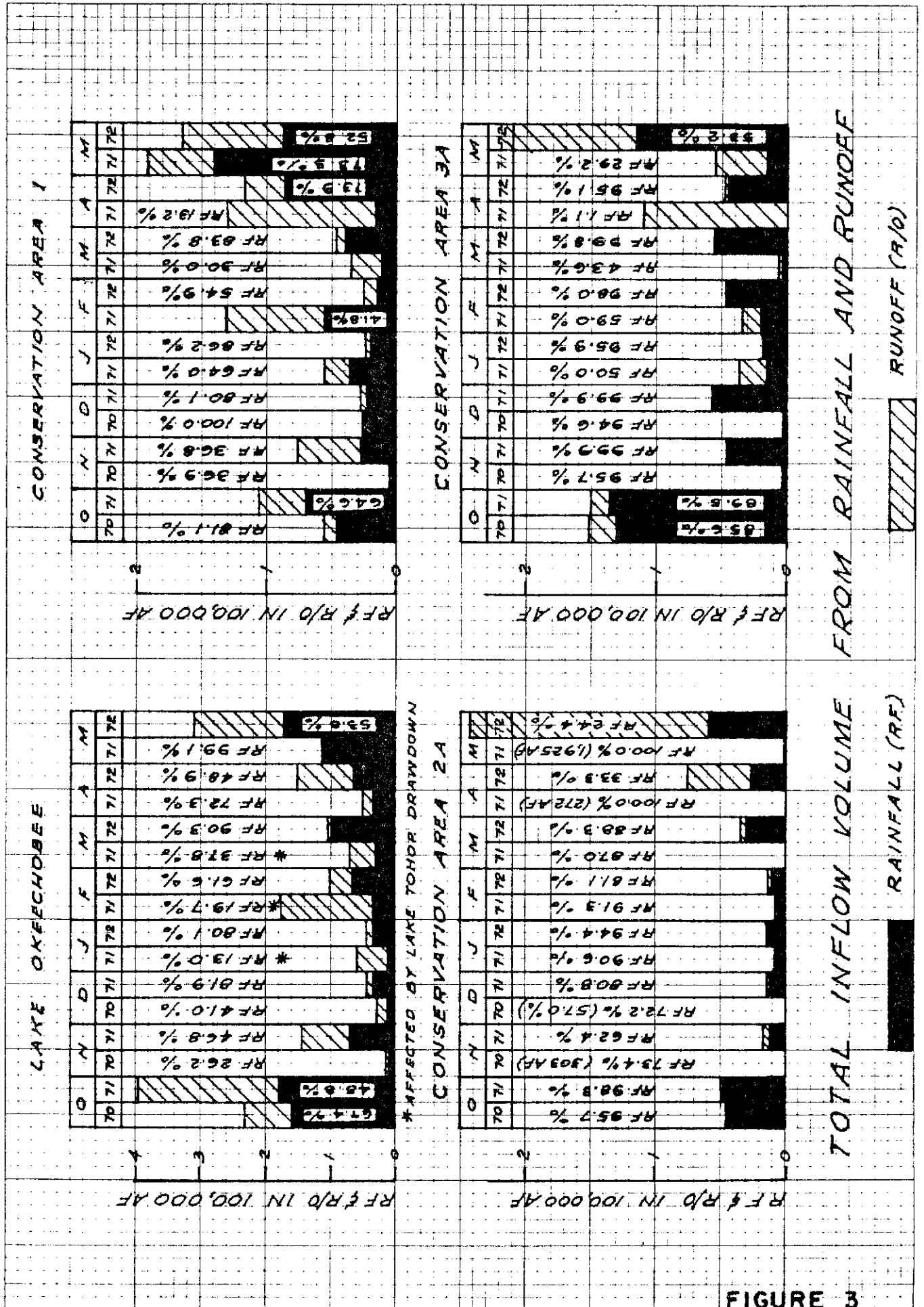
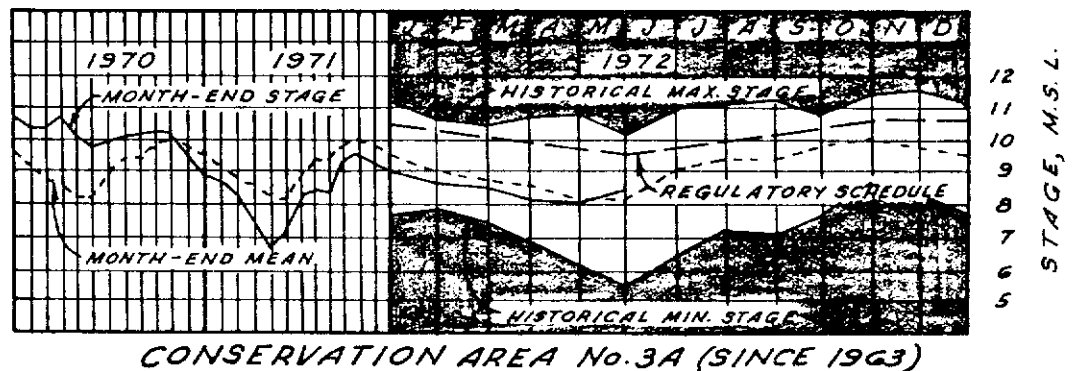
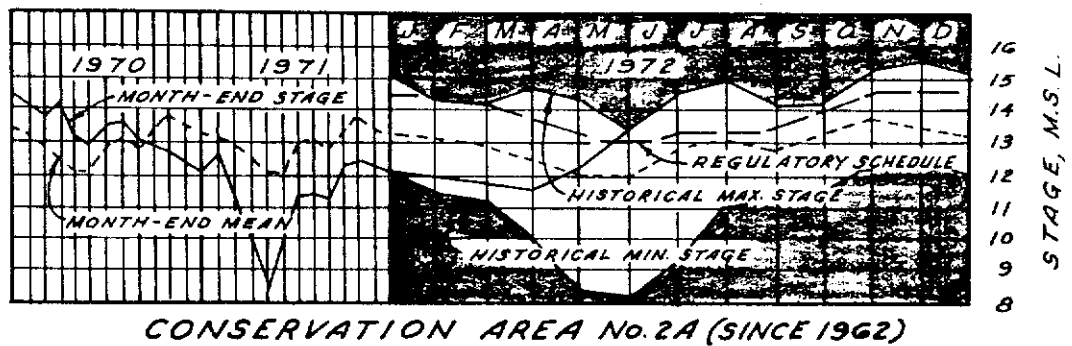
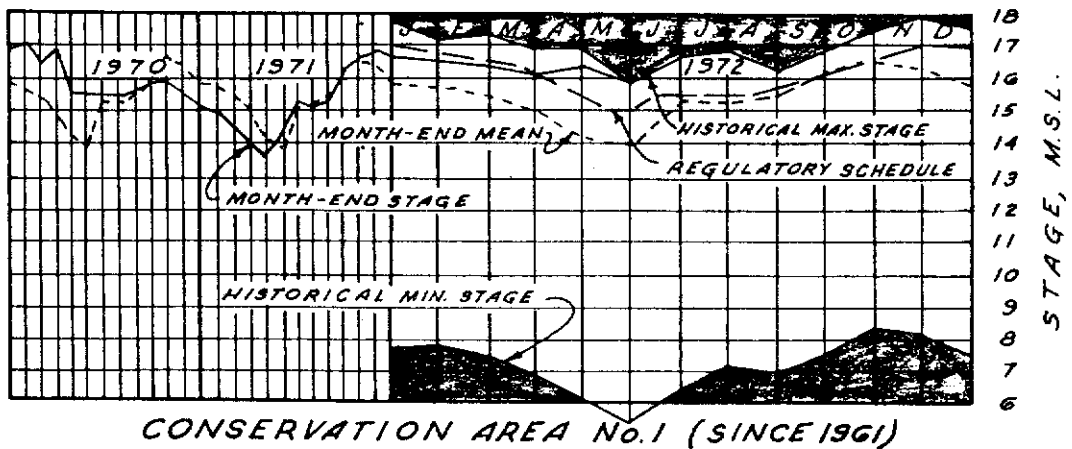
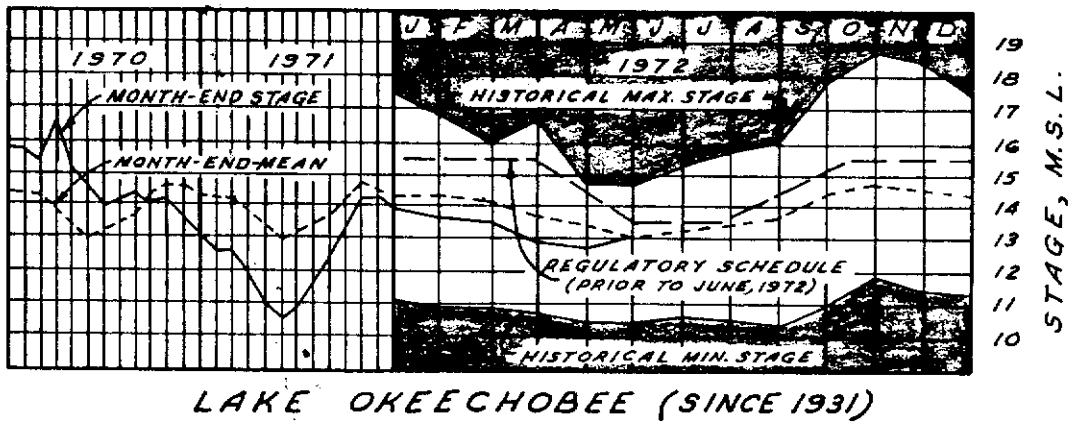


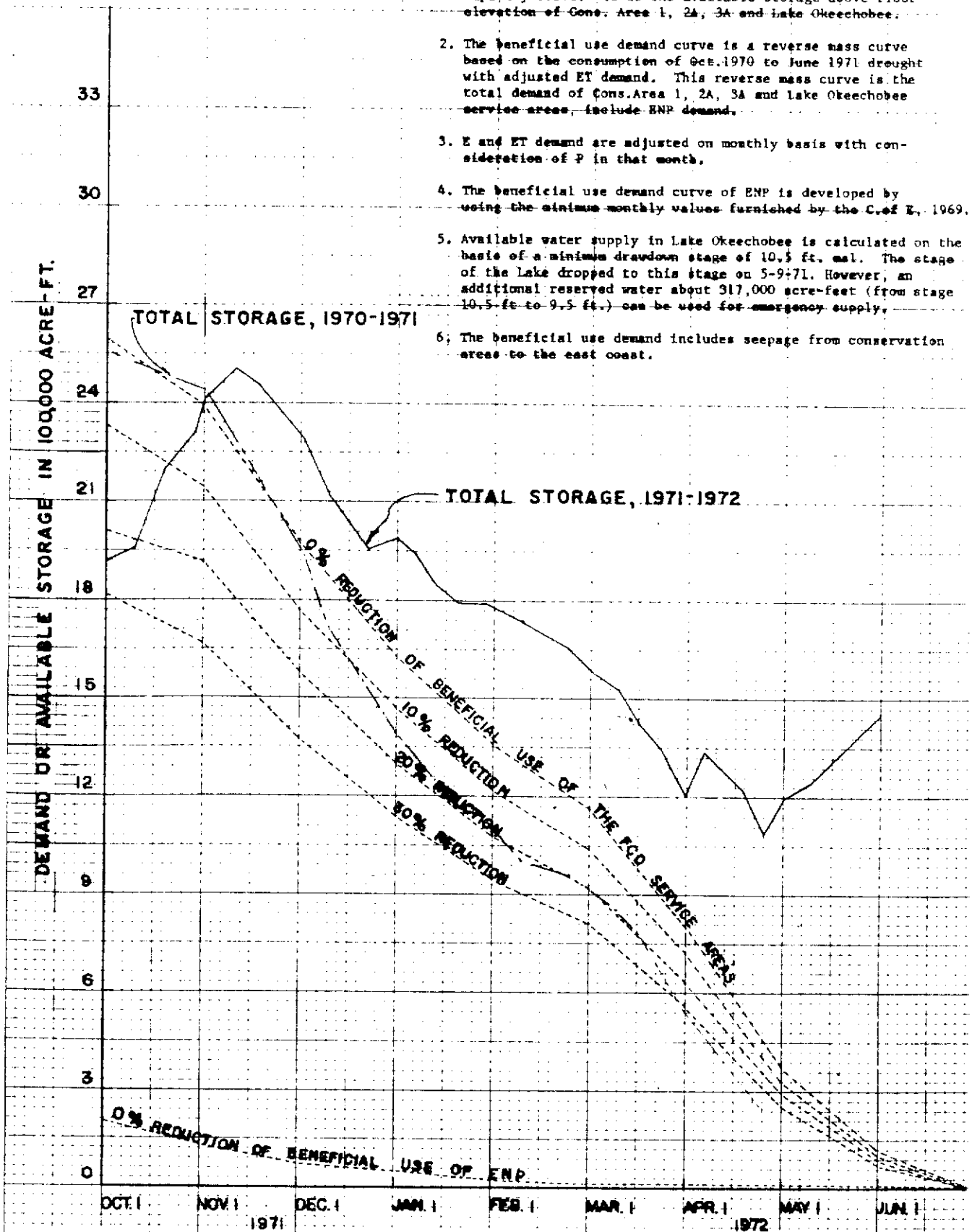
FIGURE 3



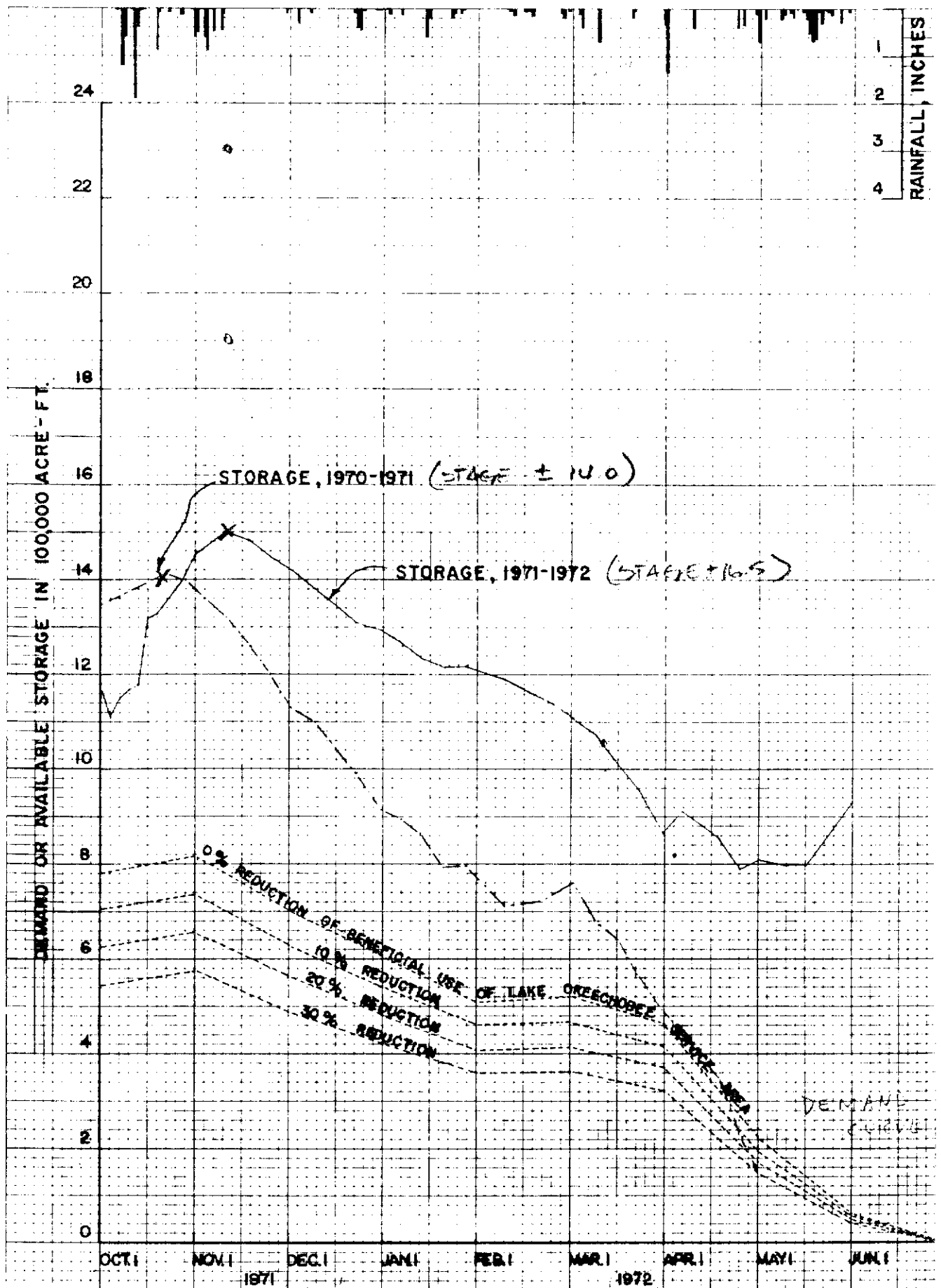
MONTH-END STAGE OF THE RESERVOIRS

Notes

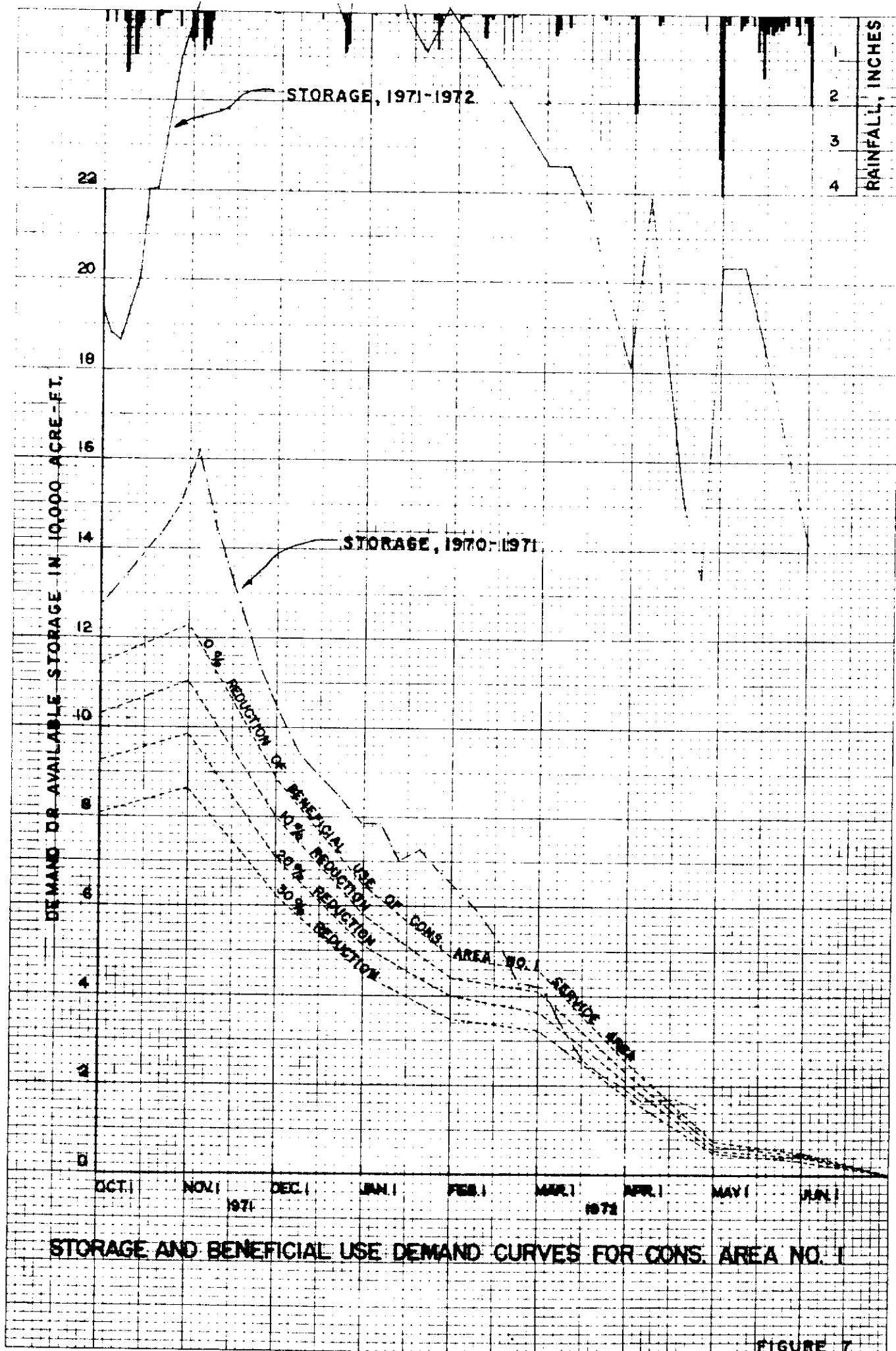
1. Total storage of the reservoirs is determined by area-capacity curve. It is the available storage above floor elevation of Cons. Area 1, 2A, 3A and Lake Okeechobee.
2. The beneficial use demand curve is a reverse mass curve based on the consumption of Oct. 1970 to June 1971 drought with adjusted ET demand. This reverse mass curve is the total demand of Cons. Area 1, 2A, 3A and Lake Okeechobee service areas, include ENP demand.
3. E and ET demand are adjusted on monthly basis with consideration of P in that month.
4. The beneficial use demand curve of ENP is developed by using the minimum monthly values furnished by the C of E, 1969.
5. Available water supply in Lake Okeechobee is calculated on the basis of a minimum drawdown stage of 10.5 ft. msl. The stage of the Lake dropped to this stage on 5-9-71. However, an additional reserved water about 317,000 acre-feet (from stage 10.5 ft. to 9.5 ft.) can be used for emergency supply.
6. The beneficial use demand includes seepage from conservation areas to the east coast.

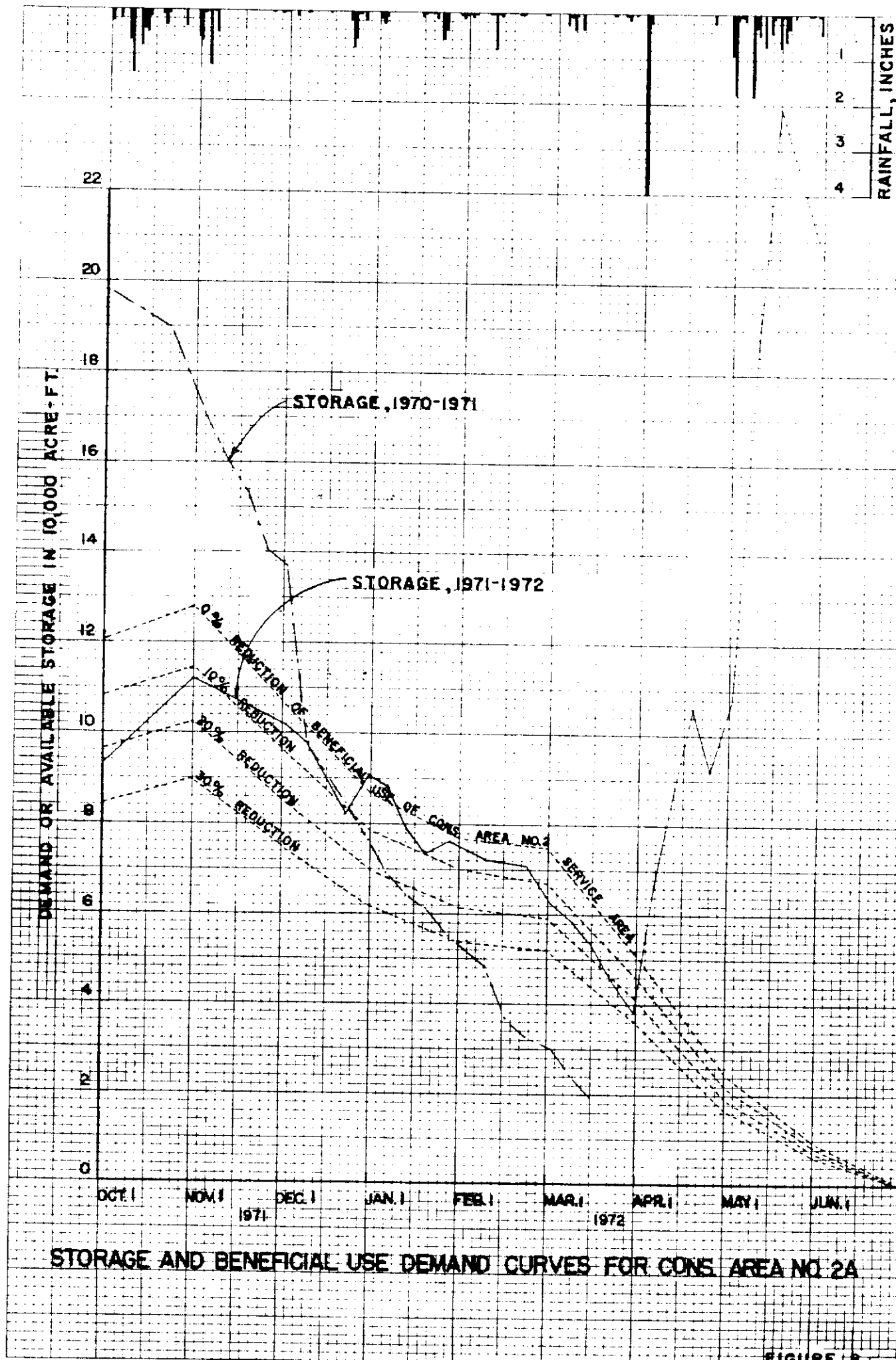


TOTAL STORAGE AND BENEFICIAL USE DEMAND CURVES FOR THE
DISTRICT SERVICE AREAS

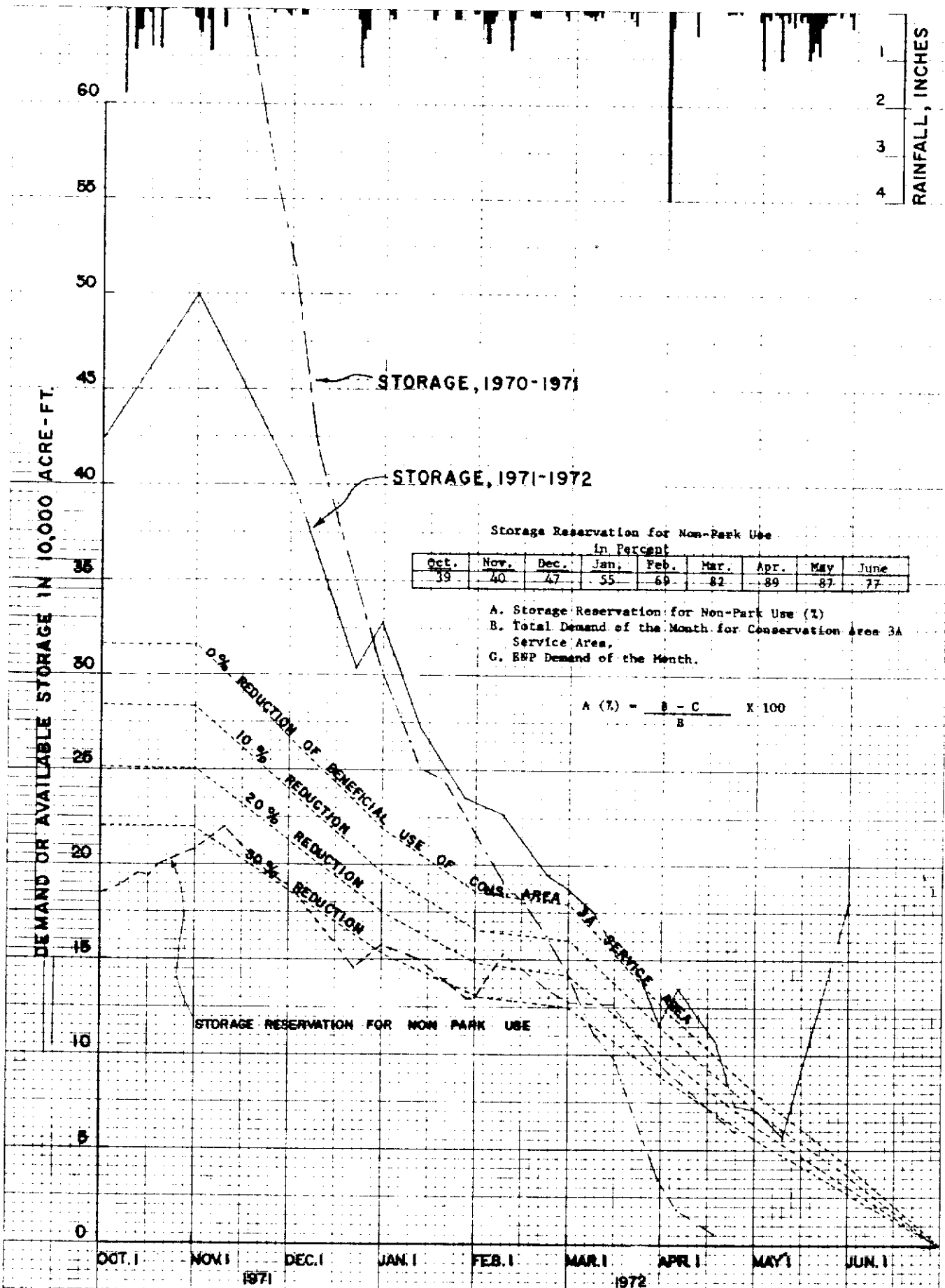


STORAGE AND BENEFICIAL USE DEMAND CURVES FOR LAKE OKEECHOBEE

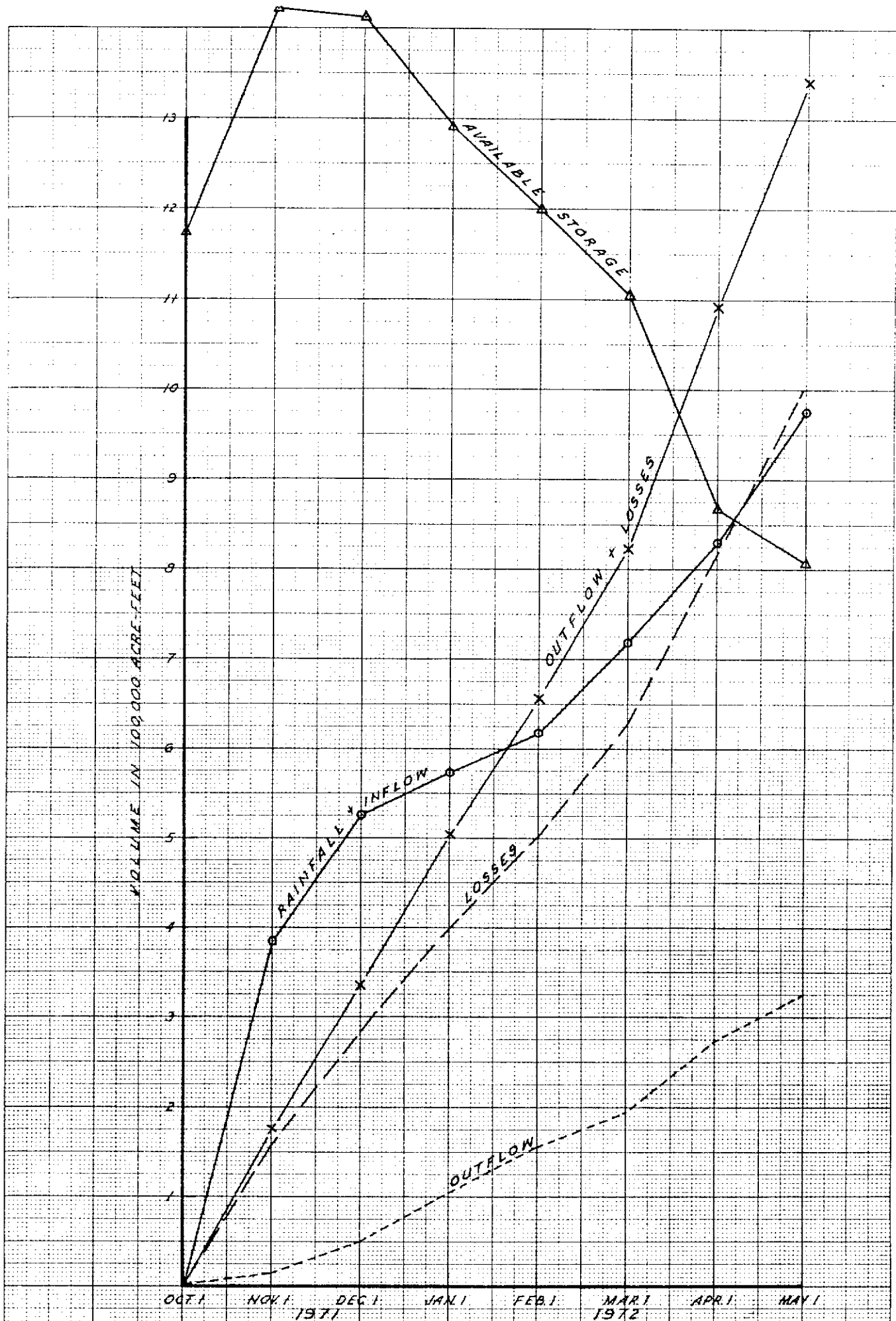




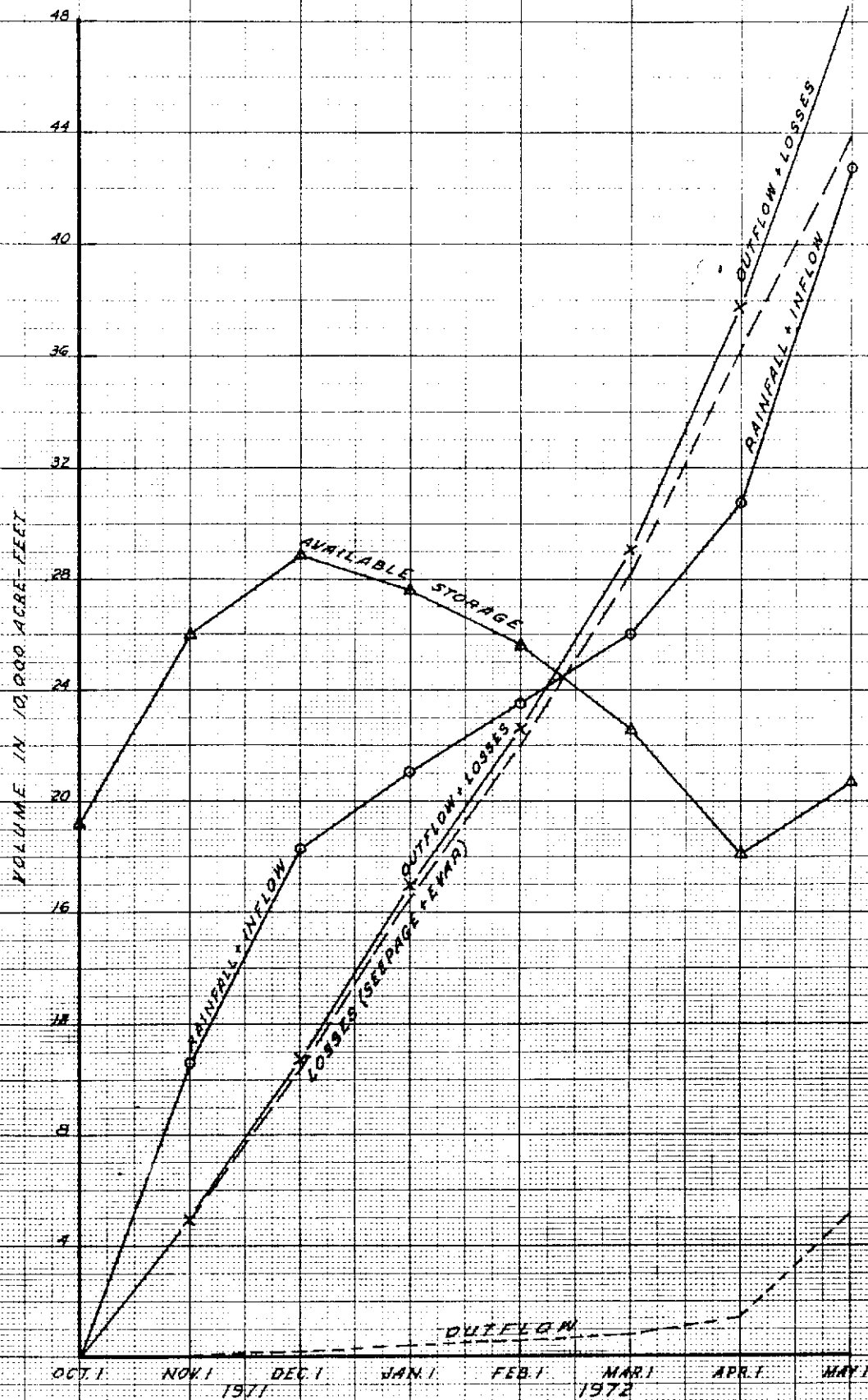
STORAGE AND BENEFICIAL USE DEMAND CURVES FOR CONS AREA NO 2A



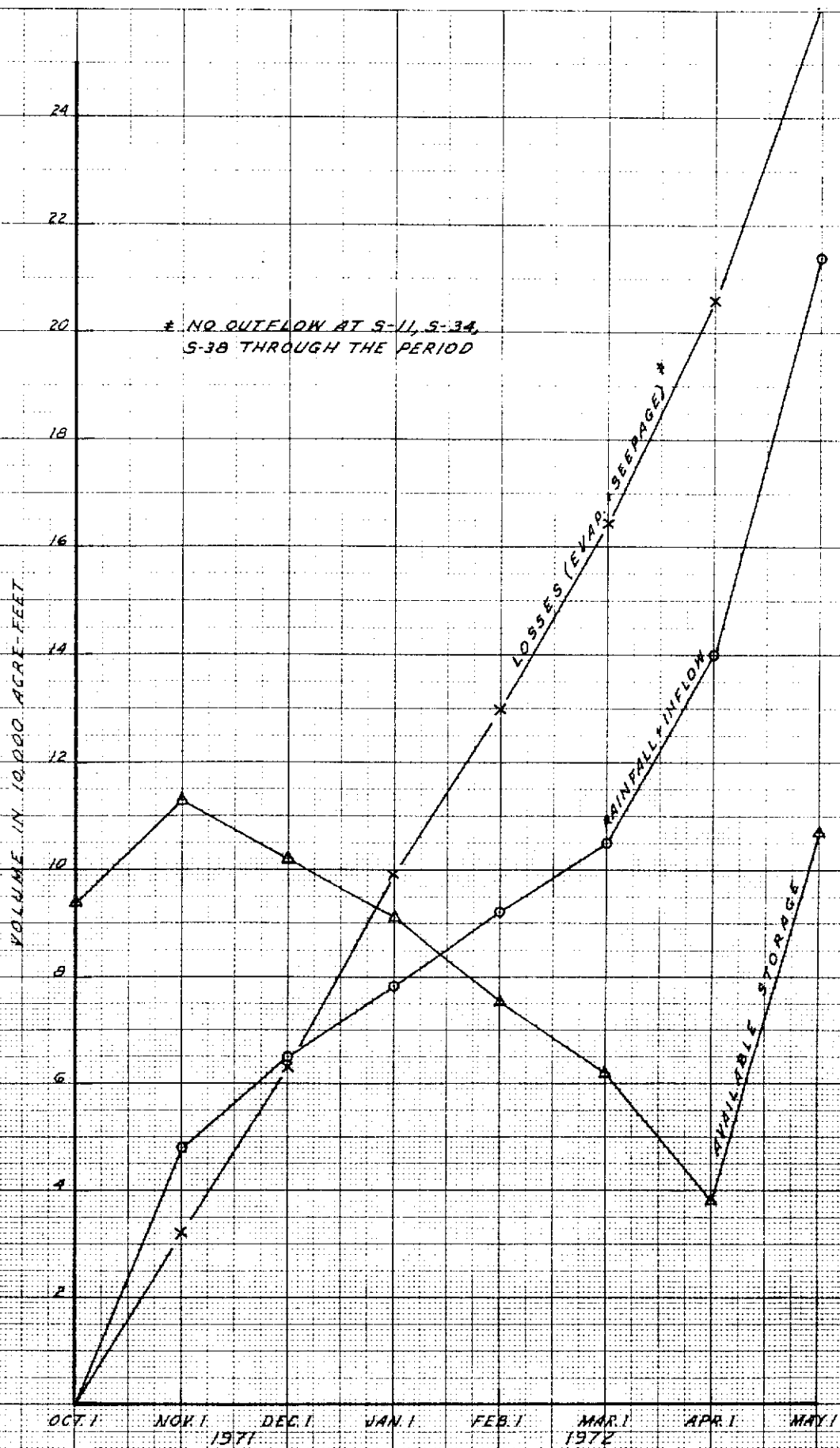
STORAGE AND BENEFICIAL USE DEMAND CURVES FOR CONS. AREA 3A



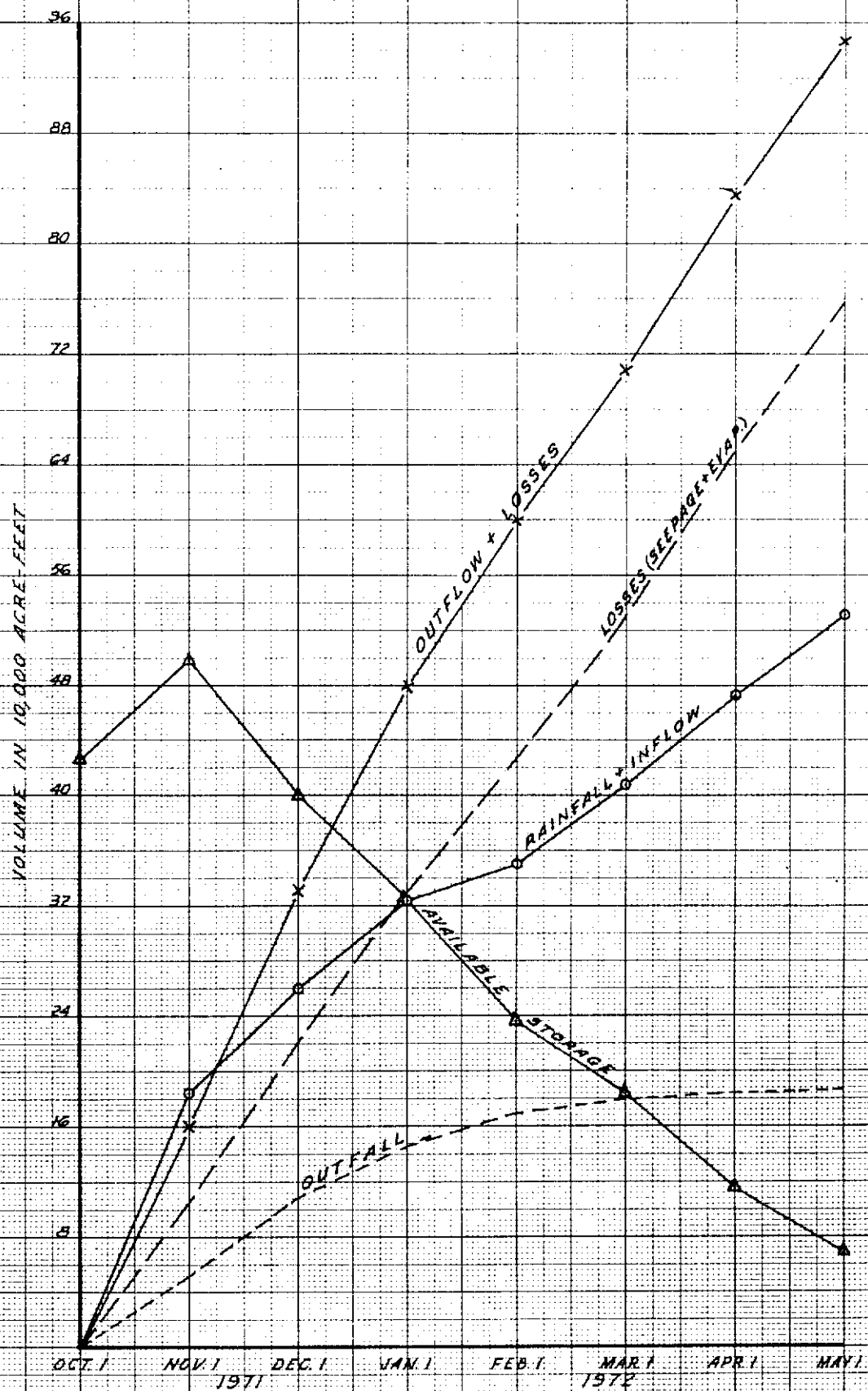
MASS CURVES OF WATER BUDGET PARAMETERS
LAKE OKECHOBEE



MASS CURVES OF WATER BUDGET PARAMETERS
CONSERVATION AREA 1



MASS CURVES OF WATER BUDGET PARAMETERS
CONSERVATION AREA 2A



MASS CURVES OF WATER BUDGET PARAMETERS
CONSERVATION AREA 3A